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(71)Applicant : FUJITSU LTD

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(72)Inventor : TANAKA TOSHIKI
NAITO TAKAO

(54) SYSTEM AND METHOD FOR COMPENSATING DISTRIBUTION

(57)Abstract:

PROBLEM TO BE SOLVED: To prevent the degradation of transmission characteristics while reducing the amount of wavelength distribution compensation at a reception terminal station by dividing a transmission line into plural blocks, providing a distribution compensator for compensating the distribution of a specified wavelength, and practically turning the distribution into zero at the terminal of a receiver concerning the specified wavelength.

SOLUTION: The signal light of (n) waves are multiplexed by a transmitter and branched through the transmission line by the receiver. On the transmission line, a distribution compensation fiber(DCF) is introduced for compensating the distribution at the interval of a block for several distribution shift fibers(DSF). In respect to the central wavelength of distribution in the signal light wavelength, the distribution compensation amount of DCF to be used for that distribution compensation is not turned into zero for each block but the final residual distribution amount of the receiver is constituted closer to zero. At the time of wavelength multiple communication, since the residual distribution to be compensated at the reception terminal station is made close to zero by the central wavelength, the other wavelength is distributed with zero as a center as well and the amount of distribution compensation on the side of reception can be reduced.

